

## STATE OF SOUTH CAROLINA

Annual Review of Purchased Gas Adjustment and  
Gas Purchasing Policies of South Carolina Electric &  
Gas CompanyBEFORE THE  
PUBLIC SERVICE COMMISSION  
OF SOUTH CAROLINA

## COVER SHEET

## DOCKET

NUMBER: 2008 - 5 - G

(Please type or print)

Submitted by: K. Chad BurgessSC Bar Number: 69456Address: SCANA Corp.  
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**DOCKETING INFORMATION** (Check all that apply)
☐ Emergency Relief demanded in petition      ☐ Request for item to be placed on Commission's Agenda expeditiously

☐ Other: \_\_\_\_\_

INDUSTRY (Check one)	NATURE OF ACTION (Check all that apply)		
<input type="checkbox"/> Electric	<input type="checkbox"/> Affidavit	<input type="checkbox"/> Letter	<input type="checkbox"/> Request
<input type="checkbox"/> Electric/Gas	<input type="checkbox"/> Agreement	<input type="checkbox"/> Memorandum	<input type="checkbox"/> Request for Certification
<input type="checkbox"/> Electric/Telecommunications	<input type="checkbox"/> Answer	<input type="checkbox"/> Motion	<input type="checkbox"/> Request for Investigation
<input type="checkbox"/> Electric/Water	<input type="checkbox"/> Appellate Review	<input type="checkbox"/> Objection	<input type="checkbox"/> Resale Agreement
<input type="checkbox"/> Electric/Water/Telecom.	<input type="checkbox"/> Application	<input type="checkbox"/> Petition	<input type="checkbox"/> Resale Amendment
<input type="checkbox"/> Electric/Water/Sewer	<input type="checkbox"/> Brief	<input type="checkbox"/> Petition for Reconsideration	<input type="checkbox"/> Reservation Letter
<input checked="" type="checkbox"/> Gas	<input type="checkbox"/> Certificate	<input type="checkbox"/> Petition for Rulemaking	<input type="checkbox"/> Response
<input type="checkbox"/> Railroad	<input type="checkbox"/> Comments	<input type="checkbox"/> Petition for Rule to Show Cause	<input type="checkbox"/> Response to Discovery
<input type="checkbox"/> Sewer	<input type="checkbox"/> Complaint	<input type="checkbox"/> Petition to Intervene	<input type="checkbox"/> Return to Petition
<input type="checkbox"/> Telecommunications	<input type="checkbox"/> Consent Order	<input type="checkbox"/> Petition to Intervene Out of Time	<input type="checkbox"/> Stipulation
<input type="checkbox"/> Transportation	<input type="checkbox"/> Discovery	<input checked="" type="checkbox"/> Prefiled Testimony	<input type="checkbox"/> Subpoena
<input type="checkbox"/> Water	<input type="checkbox"/> Exhibit	<input type="checkbox"/> Promotion	<input type="checkbox"/> Tariff
<input type="checkbox"/> Water/Sewer	<input type="checkbox"/> Expedited Consideration	<input type="checkbox"/> Proposed Order	<input type="checkbox"/> Other: <i>OK Duke</i>
<input type="checkbox"/> Administrative Matter	<input type="checkbox"/> Interconnection Agreement	<input type="checkbox"/> Protest	<i>OK D. Decker</i>
<input type="checkbox"/> Other:	<input type="checkbox"/> Interconnection Amendment	<input type="checkbox"/> Publisher's Affidavit	
	<input type="checkbox"/> Late-Filed Exhibit	<input type="checkbox"/> Report	

RETURN DATE: *OK Duke*  
SERVICE: *OK D. Decker*



K. Chad Burgess  
Senior Counsel

chad.burgess@scana.com

May 13, 2008

**VIA HAND DELIVERY**

The Honorable Charles Terreni  
Chief Clerk/Administrator  
**South Carolina Public Service Commission**  
101 Executive Center Drive (29210)  
Post Office Drawer 11649  
Columbia, South Carolina 29211

RECEIVED  
2008 MAY 13 AM 11:59  
SC PUBLIC SERVICE  
COMMISSION

RE: Annual Review of Purchased Gas Adjustment and Gas Purchasing Policies of  
South Carolina Electric & Gas Company  
Docket No. 2008-5-G

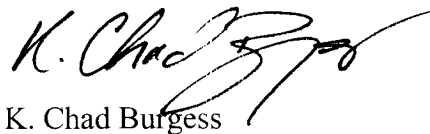
Dear Mr. Terreni:

Enclosed for filing, on behalf of South Carolina Electric & Gas Company is the direct testimony of Martin K. Phalen, James E. Swan IV, Rose Jackson, and Harry L. Scruggs. Please accept the original and twenty-five (25) copies of each for filing. Additionally, please acknowledge your receipt of these documents by file-stamping the extra copies that are enclosed and returning them to us via our courier.

By copy of this letter, we are serving counsel for the South Carolina Office of Regulatory Staff with a copy of the enclosed direct testimony and attach a certificate of service to that effect.

If you have any questions regarding this matter, please advise.

Very truly yours,

  
K. Chad Burgess

KCB/kms  
Enclosures

cc: Shannon Bowyer Hudson, Esquire  
Shealy Boland Reibold, Esquire  
(all hand delivery with enclosures)

**BEFORE**  
**THE PUBLIC SERVICE COMMISSION OF**  
**SOUTH CAROLINA**  
**DOCKET NO. 2008-5-G**

RECEIVED  
2008 MAY 13 AM 11:59  
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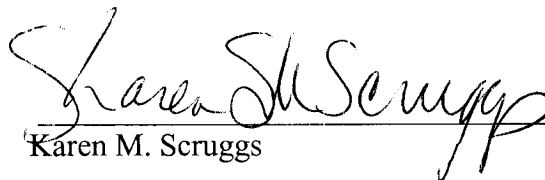
IN RE:

Annual Review of Purchased Gas )  
Adjustment and Gas Purchasing Policies )  
of South Carolina Electric & Gas Company )

**CERTIFICATE  
OF SERVICE**

\_\_\_\_\_ )  
This is to certify that I have caused to be served this day ten (10) copies of South Carolina Electric & Gas Company's **Testimony of Martin K. Phalen, James E. Swan IV, Rose Jackson and Harry L. Scruggs** via hand delivery to the persons named below at the address set forth:

Shannon Bowyer Hudson, Esquire  
Shealy Boland Reibold, Esquire  
**Office of Regulatory Staff**  
1441 Main Street, Suite 300  
Columbia, SC 29201

  
\_\_\_\_\_  
Karen M. Scruggs

Columbia, South Carolina  
This 13th day of May 2008

**DIRECT TESTIMONY OF  
MARTIN K. PHALEN  
ON BEHALF OF  
SOUTH CAROLINA ELECTRIC & GAS COMPANY  
DOCKET NO. 2008-5-G**

2008 MAY 13 PM 12:00  
SC PUBLIC SERVICE  
COMMISSION

RECEIVED

**Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS AND POSITION.**

A. My name is Martin K. Phalen, and my business address is 1426 Main Street, Columbia, South Carolina. I am employed by South Carolina Electric & Gas Company ("SCE&G" or the "Company") as Vice President, Gas Operations.

**Q. PLEASE DESCRIBE YOUR EDUCATIONAL AND BUSINESS BACKGROUND.**

A. Following my graduation from the College of Charleston in 1977, I was employed with Cummins Engine Company in Charleston, South Carolina, where I held various management and executive-level positions. In 1988, I joined SCE&G. Since that time, I have held executive-level positions in Human Resources & Administration, Operational Support, and effective May 2003, Gas Operations. I am a former member of the Board of Directors for the Southeastern Electric Exchange, a member of the Executive Council for the Southern Gas Association, and am Chair for the Executive Committee of the Southern Gas Association's distance learning subsidiary, Corporate TeleLink Network.

**Q. WHAT ARE YOUR DUTIES AS VICE PRESIDENT, GAS OPERATIONS?**

A. As Vice President, Gas Operations for SCE&G, my corporate responsibilities include, among other things, oversight of the daily operations of SCE&G's natural gas distribution system, including maintenance and construction. Additionally, I am

1 responsible for the overall reliability of the system, which includes ensuring that the  
2 system is capable of providing safe and reliable service to our customers.

3 **Q. WHAT IS THE PURPOSE OF THIS PURCHASED GAS ADJUSTMENT**  
4 **(“PGA”) PROCEEDING?**

5 A. By Order No. 87-898, dated August 14, 1987, the Public Service  
6 Commission of South Carolina (“Commission”) instituted an annual PGA review  
7 of SCE&G’s gas purchasing policies and practices. These PGA reviews are  
8 conducted to determine the prudence of SCE&G’s gas purchasing policies and  
9 practices during the period under review and to determine if SCE&G properly  
10 applied its tariffs in recovering its gas costs.

11 It is worth noting that in every PGA review, the Commission has found that  
12 SCE&G’s gas purchasing policies and practices were prudent and that the  
13 Company properly adhered to the gas cost recovery provisions of its gas tariff and  
14 applicable Commission directives and orders.

15 In this PGA proceeding, the Commission will hear from personnel who  
16 implement SCE&G’s gas purchasing practices and policies and who address tariff  
17 issues on a day-to-day basis specifically relating to the period under review,  
18 March 1, 2007 through February 28, 2008 (“Review Period”). Rose Jackson,  
19 General Manager – Gas Supply & Capacity Management, explains SCE&G’s gas  
20 purchasing practices, gas supply and interstate pipeline capacity, followed by a  
21 discussion on financial hedging. James E. Swan, IV, Controller of SCE&G,  
22 discusses the accounting treatment for prepayments and collections related to

1 municipal fees and SCE&G's proposal for crediting accumulated balances in certain  
2 prepayment accounts to customers through the cost of gas calculation. Harry L.  
3 Scruggs, Lead Rate Analyst, discusses the PGA methodology for recovering the  
4 cost of gas implemented by the Company pursuant to Commission Order No.  
5 2006-679.

6 **Q. PLEASE DESCRIBE THE PURPOSE OF YOUR TESTIMONY.**

7 A. The purpose of my testimony is to describe SCE&G's natural gas  
8 distribution system from an operating standpoint and discuss the primary facilities  
9 that comprise the system, including the capacity of the system for serving  
10 SCE&G's customers. I will also discuss the construction projects that SCE&G is  
11 engaged in which are designed to increase the capacity, reliability, and operational  
12 flexibility of SCE&G's system.

13 **Q. PLEASE DESCRIBE SCE&G'S NATURAL GAS DISTRIBUTION**  
14 **SYSTEM FROM AN OPERATIONS STANDPOINT.**

15 A. SCE&G's natural gas distribution system consists of approximately 15,500  
16 miles of transmission and distribution mains and related service facilities. The  
17 Company's distribution facilities range in diameter from 5/8-inch polyethylene to  
18 20-inch steel pipe and carry natural gas under pressures typically ranging from 25  
19 pounds per square inch gauge ("psig") to 1,100 psig in order to deliver safe,  
20 reliable natural gas service to over 300,000 factories, businesses, and homes in  
21 South Carolina. The Company also maintains 96 metered delivery points through

1 which gas is delivered to SCE&G's system and then distributed by the Company  
2 to our customers. SCE&G currently provides natural gas service in all or part of  
3 35 of the 46 counties in South Carolina covering more than 23,000 square miles.

4 **Q. PLEASE PROVIDE A BRIEF OVERVIEW OF SCE&G'S GAS**  
5 **PURCHASING PRACTICES FOR THE REVIEW PERIOD.**

6 A. During the Review Period, SCE&G purchased all of its natural gas supply  
7 directly from gas suppliers. While Ms. Jackson will testify on this subject in  
8 greater detail, SCE&G's management analyzes and considers the supply and  
9 interstate capacity assets of its business on an on-going basis in order to provide  
10 safe, reliable, and economical natural gas service in South Carolina. All of the  
11 variables related to the growth in our state and the demand of SCE&G's system  
12 must be balanced with corresponding supply and capacity needs. In conclusion, I  
13 want to highlight in this testimony that the Company procured reliable and  
14 reasonably priced natural gas supplies.

15 **Q. WHAT LIQUIFIED NATURAL GAS ("LNG") FACILITIES DOES SCE&G**  
16 **OPERATE?**

17 A. SCE&G owns and operates two LNG facilities. These facilities are located  
18 at Bushy Park near North Charleston, and at Salley, located in western Orangeburg  
19 County. Exhibit No. \_\_\_\_ (MKP-1) is an aerial photograph of the Bushy Park  
20 facility and Exhibit No. \_\_\_\_ (MKP-2) is an aerial photograph of the Salley  
21 facility. The LNG facilities allow SCE&G to store natural gas in a liquid form and

1 inject vaporized gas into SCE&G's system when needed. These assets are used  
2 primarily to help meet peak loads on the system and as a backup supply of gas in  
3 emergency situations.

4 **Q. WHAT ARE THE CAPACITIES OF THE LNG FACILITIES?**

5 A. The Bushy Park facility has the capability of converting natural gas into a  
6 liquid, a process known as liquefaction. It can store up to 980,000 Mcf (thousand  
7 cubic feet) of LNG. The Salley facility has the capability of storing up to 900,000  
8 Mcf of trucked-in LNG. LNG must be transported to Salley via truck because  
9 Salley does not possess the ability to liquefy natural gas.

10 **Q. PLEASE BRIEFLY DISCUSS THE BTU (BRITISH THERMAL UNIT)**  
11 **CONTENT OF GAS STORED AT THE COMPANY'S LNG FACILITIES.**

12 A. An important aspect of LNG system operation is the management of the  
13 Btu content of the liquefied gas placed into storage. Since it began operating the  
14 LNG facilities in November 2006, SCE&G has closely monitored the Btu content  
15 of its LNG which increases naturally over time while in storage. This increased  
16 Btu content is caused primarily by two factors: (i) increases in the Btu content of  
17 the gas delivered to the liquefaction plant; and (ii) the occurrence of a natural  
18 process referred to as "weathering" whereby lighter, lower Btu hydrocarbons boil  
19 off leaving over time a heavier, higher Btu content liquid.

20 Since November 2003, the Elba Island LNG facility, located near  
21 Savannah, Georgia, has delivered gas to SCE&G's system with increasingly



1 higher Btu content. Some of the natural gas delivered to the Company from Elba  
2 Island is routed to SCE&G's LNG facility at Bushy Park where the gas is then  
3 liquefied for storage. After the higher Btu content gas is liquefied and placed into  
4 the Company's LNG tanks at Bushy Park and Salley, the Btu content of the gas  
5 continues to rise over time due to "weathering."

6 During the Review Period, it became necessary for SCE&G to inject into  
7 its system some of the gas stored at its Salley facility. In order for the gas to reach  
8 SCE&G's system, the gas was transported through an interstate pipeline owned  
9 and operated by Carolina Gas Transmission Corporation ("CGTC"). In its tariff  
10 approved by the Federal Energy Regulatory Commission, CGTC has a limit on the  
11 Btu content of the gas that it will transport across its system. More specifically,  
12 the CGTC tariff limits the Btu content of the gas that SCE&G can inject from its  
13 LNG plants into CGTC's interstate transmission system to 1,075 Btu per cubic  
14 foot. In January 2008, the Company injected vaporized gas from its Salley LNG  
15 facility into CGTC's system measuring 1,075.2 Btu per cubic foot and thus,  
16 slightly exceeded the Btu limit contained in the CGTC tariff.

17 **Q. DID CGTC ASSESS ANY PENALTY AGAINST SCE&G FOR**  
18 **EXCEEDING THE BTU LIMIT OF ITS TARIFF?**

19 A. No. Furthermore, no operational, reliability or customer issues occurred  
20 as a result of SCE&G's injection of gas with a Btu content of 1,075.2 per cubic  
21 foot into CGTC's system. Furthermore, I am pleased to inform the Commission

1 that the Company's LNG assets performed well and functioned as expected when  
2 called into service.

3 **Q. HOW DOES SCE&G INTEND TO MANAGE THE INCREASED BTU**  
4 **LEVELS ON A GOING FORWARD BASIS?**

5 A. SCE&G has managed the Btu levels by planning and implementing a  
6 structured empty/refill cycle that considered both the system need for vaporized  
7 natural gas and the need to cycle the inventory for purposes of Btu management.  
8 These management activities, however, have become more challenging as a result  
9 of receiving higher Btu content gas from Elba Island. By 2010, SCE&G  
10 anticipates that it will begin physically receiving more gas supply from Elba Island  
11 and this gas supply will more than likely have a Btu content at or near the CGTC  
12 tariff limit before it is liquefied and placed into SCE&G's on-system storage.  
13 When this gas is removed from storage the Btu content of the gas could – as a  
14 result of weathering – exceed CGTC's tariff limit of 1,075 Btu per cubic foot.

15 To address the CGTC tariff limit and avoid impacting our customers' end-  
16 use appliances and equipment, SCE&G is presently engineering and procuring  
17 equipment necessary to manage the Btu level at both LNG facilities. The  
18 engineering solution is to inject nitrogen into the gas stream during vaporization  
19 activities. When nitrogen is mixed with the vaporized gas leaving the LNG  
20 facilities, the Btu content of the gas will decrease to a level that is in compliance  
21 with CGTC's tariff and also avoid any customer operational issues.

1 SCE&G anticipates that the “nitrogen blending” facilities will be installed  
2 prior to the 2008-2009 winter heating season. This equipment and our continued  
3 inventory management program will allow us to effectively manage the Btu  
4 content of natural gas that flows into the Company’s system.

5 **Q. PLEASE DISCUSS THE GROWTH OF FIRM DEMAND ON THE**  
6 **COMPANY’S SYSTEM.**

7 A. In spite of extremely volatile market prices of gas over the past few years  
8 and a recent downturn in the housing market, firm demand on our system has  
9 continued to grow. During the Review Period, firm demand on SCE&G’s system  
10 grew by approximately 2.0%.

11 **Q. WHAT STEPS HAS SCE&G TAKEN TO IMPROVE AND EXPAND ITS**  
12 **NATURAL GAS DISTRIBUTION SYSTEM DURING THE REVIEW**  
13 **PERIOD?**

14 A. Over the years, SCE&G has consistently improved and expanded its system  
15 by adding pipeline to meet new demand and create operating flexibility on its  
16 system. Exhibit No. \_\_\_\_ (MKP-3) is a map which reflects the recent expansions  
17 of SCE&G’s gas system, most of which are occurring to accommodate population  
18 growth along the South Carolina coast. For example, during the Review Period,  
19 SCE&G improved its gas system in the Myrtle Beach area by completing  
20 construction of a new 6-inch pipeline that crosses the intracoastal waterway. This

1 improvement provides an additional natural gas feed into the North Myrtle Beach  
2 area and thus, enhances reliability to our customers in this portion of the state.

3 In addition, SCE&G recently completed hydraulic modeling of its entire  
4 natural gas distribution system. Hydraulic modeling is a process that involves  
5 modeling a natural gas system using computer software to accurately predict the  
6 pressures and flows on the system. Hydraulic modeling is a very useful and  
7 helpful tool which allows a company to (i) ensure that its designs are robust, (ii)  
8 detect weaknesses in its physical system prior to an occurrence materializing, and  
9 (iii) plan for system and supply needs accounting for growth. The knowledge  
10 gained as a result of the hydraulic modeling will assist the Company as it monitors  
11 the performance of its system.

12 **Q. PLEASE BRIEFLY DESCRIBE THE SAFETY PERFORMANCE OF**  
13 **SCE&G CONCERNING ITS NATURAL GAS SYSTEM.**

14 A. As a whole, the natural gas pipeline industry has an outstanding safety  
15 record due in part to comprehensive federal and state regulation. At the federal  
16 level, the United States Department of Transportation and the Pipeline and  
17 Hazardous Materials Safety Administration, acting through the Office of Pipeline  
18 Safety, have developed over the years, pipeline safety regulations and are charged  
19 with monitoring SCE&G's compliance with these regulations. At the state level,  
20 the South Carolina Office of Regulatory Staff monitors the Company's  
21 compliance with pipeline safety regulations. These pipeline safety regulations

1 include, among other things, provisions governing pipeline design, construction,  
2 testing, operations, maintenance, and emergency response activities. There are  
3 also specific requirements for training and qualifying personnel to work on natural  
4 gas systems, as well as additional requirements for administering integrity  
5 management programs for gas transmission pipelines.

6 SCE&G operates its natural gas system in full compliance with all laws and  
7 regulations. The Company employees who work on SCE&G's pipeline system  
8 and at the LNG facilities take great pride in safety performance. SCE&G's  
9 highest priority is to safeguard and protect those individuals who come into  
10 contact with the SCE&G system and product, including employees, customers,  
11 and the public at-large.

12 **Q. WHAT ARE YOU REQUESTING OF THE COMMISSION IN THIS**  
13 **PROCEEDING?**

14 A. The primary commitments of SCE&G continue to be to operate our system  
15 in a safe, reliable and efficient manner. Further, our employees are committed to  
16 providing outstanding customer service and operational excellence. During the  
17 Review Period, the Company prudently managed its business operations, which  
18 included the purchase and recovery of its gas supplies and administration of the  
19 PGA. Therefore, on behalf of SCE&G, I respectfully request the Commission find  
20 that the Company has recovered its gas costs for the Review Period consistent  
21 with its tariffs and Commission orders and that it has purchased its gas supplies

1           and administered the PGA in a prudent and reasonable manner.

2    **Q.    DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

3    A.           Yes.

Exhibit No. \_\_\_\_ (MPK-1)

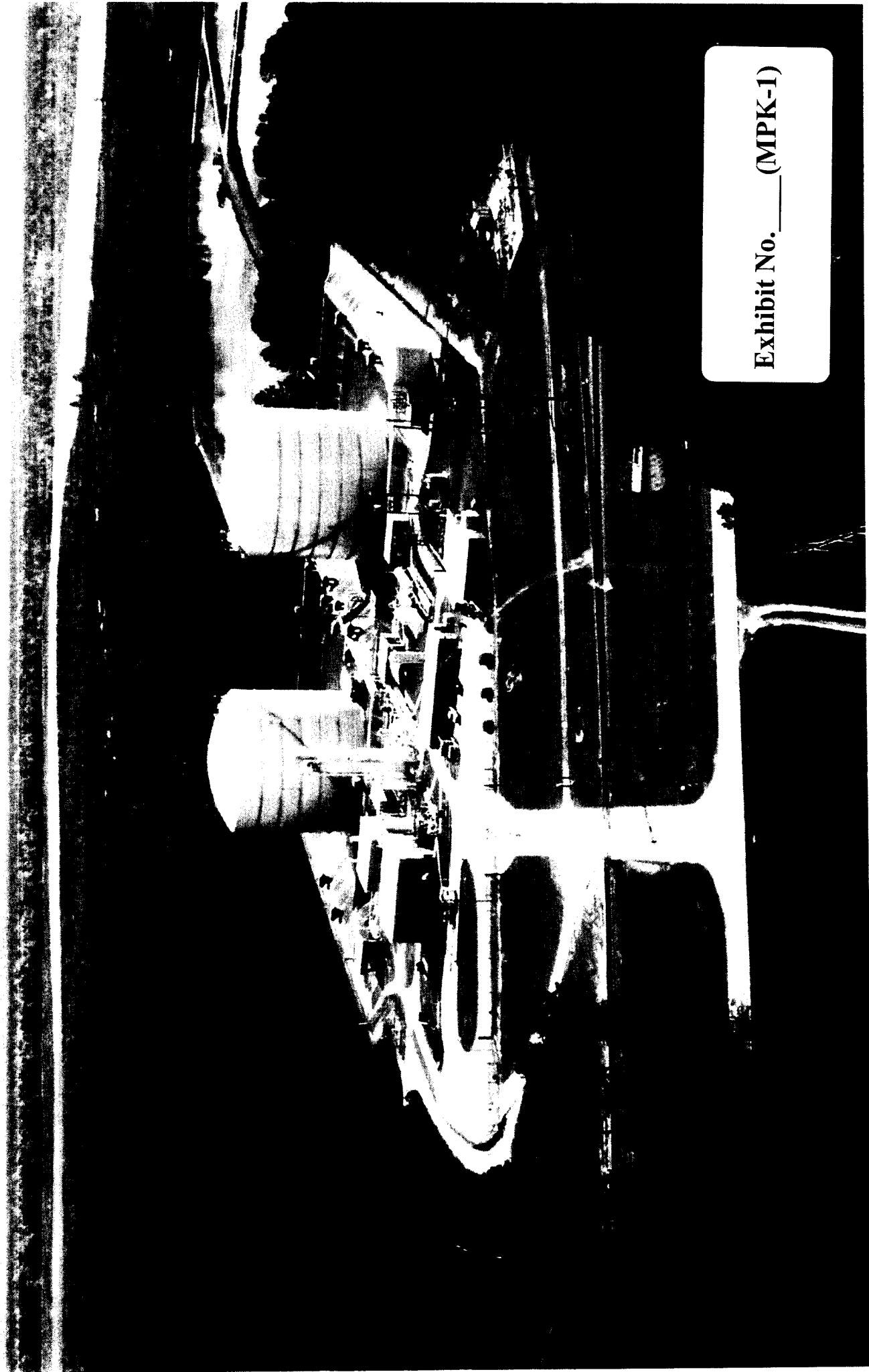


Exhibit No. \_\_\_\_ (MPK-2)

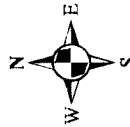




# SCE&G Gas Districts

## Percentage 2007-2008 Growth

418.33 Miles of new main installed



### Legend

- Central Division
- Coastal District
- Eastern Division
- Low Country District
- Southern Division
- Western Division

Pipe installed 2007 -2008

Exhibit No. (MPK-3)